



Indian Institute of Technology Madras  
Chennai-600 036  
Department of Civil Engineering

Ref No: CIE/EWRE-venu/2012/ENQ1

Dt: 7<sup>th</sup> November 2012

Sub: Quotations for Fabrication of Hydraulic Flume (As per enclosed Specification)

**DUE DATE On: 27.11.2012**

Sir/Madam,

- 1 Quotations are invited **in duplicate** for the **item/s shown above /as per enclosed Specifications**.
2. The quotations duly sealed and super scribed on the envelope with the enquiry reference No. & due date should be addressed to **The Head, Department of Civil Engineering, IIT Madras, Chennai – 600036 so as to reach on or before the due date.**
3. The quotation should be valid for **(60) Sixty days from the due date and period of delivery time** required.
4. Relevant literature pertaining to the items quoted with full specifications (and drawing, if any) should be sent along with the quotations, **wherever applicable**. Samples if called for, submitted free of charges and collected back at the suppliers expenses. Additionally, **the required information as per specifications are to be provided by the firm** participating in this tender
5. **Local Firms:-**Quotations should be for **free delivery to this Institute**. If Quotations are for EX-Go down, delivery charges **should be indicated separately**.
6. Firms outside Chennai: Quotations should be for F.O.R. Chennai. If F.O.R. Consignor station. Freight charges by Train/Lorry/Air/Ship transport must be indicated. If Ex-godown, packing Forwarding and **Freight charges must be indicated**.
7. The rate of **Sales/General Taxes** and the percentages of such other taxes legally leviable and intended **to be claimed should be distinctly shown** along with the price quote. Where this is not done, **no claim** for sales/General taxes **will be admitted at any later stage** and on any ground whatever. The taxes leviable should take into consideration run with no profit motive and which necessary **Concessional Sales Tax Certificate would be issued at the time of passing the bill**.
8. Goods should be **supplied carriage paid and insured**.
9. Goods shall not be supplied **without an official supply order**.
10. **Warranty period:** Explicitly Warranty period is to be given for One year by the firms

Head of the Department

# Specifications

## **Flume size:**

Length: 15 m

Height: 1.0 m

Width: 0.9 m

## **Flume bottom:**

- Flume bottom is made up of steel sheet of size 1.0 m width, 15 m long and 6 mm thick
- This steel sheet is placed on top of the Two Angle sections (as shown in Figure 8, 9&10)
- The size of the Angle Section is 6 cm deep, 6 cm flange, 6 mm thick and 15 m long
- These Angle Sections are supported by Channel Sections placed on top of the brick wall at an interval of 1.5 m (as shown in Figure 2 & 3)
- The size of the Channel Section is 9 cm deep, 5 cm flange, 6 mm thick and 1.5 m long

## **Vertical portion of the flume:**

- The vertical portion of flume is divided into 10 sections of each 1.5 m long (as shown in Figure 3, 4 & 8)
- Each vertical section is made up of glass of 1.05 m height, 12 mm thick and 1.5 m long
- The glass is supported by vertical joints placed at an interval of 1.5 m for the entire length
- The vertical joints are prepared using Two Angle Sections, each of size 5 cm deep, 5 cm flange, 6 mm thick and 1.10 m long (as shown in Figure 8, 9 & 10)

## **Gaps:**

- All the gaps between the steel joints must be filled with rubber

**Flume top:**

- Two Angle Sections of size 6 cm deep, 6 cm flange, 6 mm thick and 15 m long are placed on top portion of the flume to support the vertical joints, glass and instrument rail
- The top portion of the glass is covered with the help of an Angle Section of size 3.5 cm deep, 3.5 cm flange, 5 mm thick and 15 m long (as shown in Figure 12)
- Instrument rail gauge is provided on top of the flume (as shown in Figure 14 & 15)
- The Instrument rail gauge is prepared with a Channel Section of size 7 cm deep, 5 cm flange, 6 mm thick and 15 m long (as shown in Figure 6 & 7)
- The height of the Instrument rail from flume top is 0.15 m
- Vertical supports are provided at a regular interval to support the Instrument rail (as shown in Figure 8, 10 & 15)

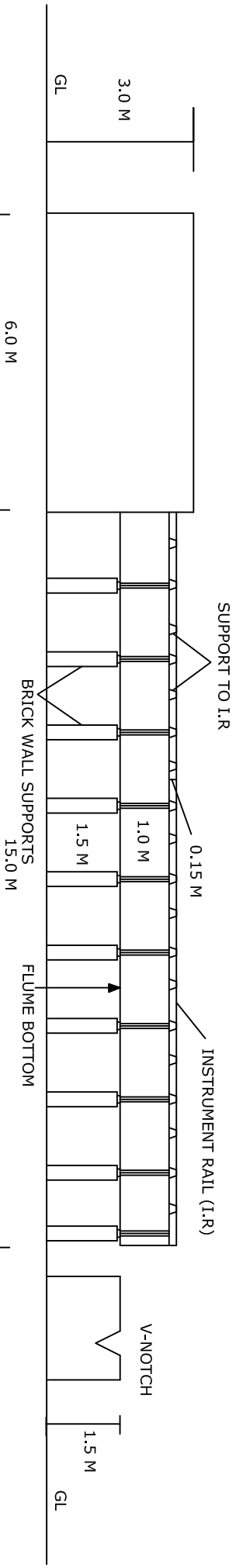
**Gates:**

- Vertical gate to be fixed at the downstream of the flume (as shown in Figure 12 & 13)

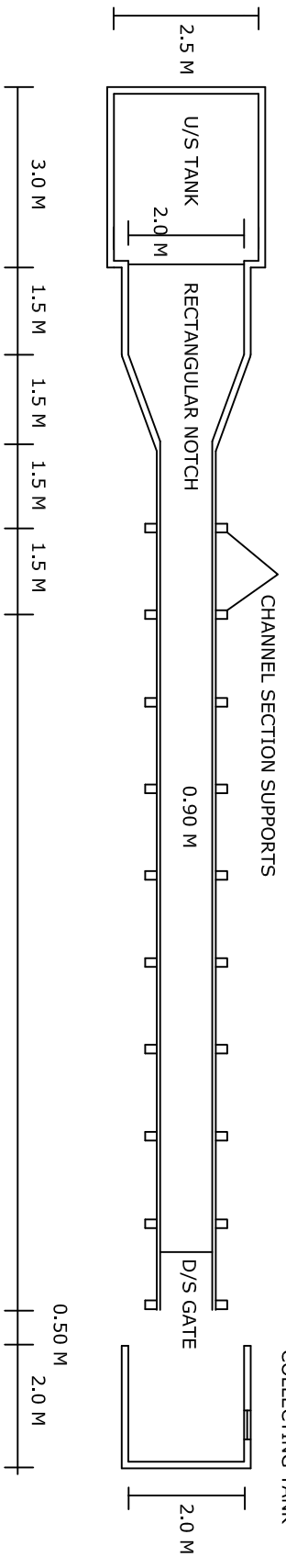
**Masonry work:**

- The upstream tank and downstream collecting tank are made up of brick masonry. The size of the brick wall is four and half inch thickness with 1:6 plastering (as shown in Figure 1, 5 & 11)
- V-Notch is provided to the downstream collecting tank
- The Institute will take the responsibility to complete the masonry work related to the flume setup (ex. upstream tank, approach channel, collecting tank, all the vertical brick wall supports etc.)

# HYDRAULIC FLUME



## ELEVATION



## PLAN